

# Installation Instructions

## Tandem Compressor Operation Kit

### Part #ACA-TCO & TCR, 1 & 2

#### Description:

The simultaneous operation of two compressors connected to a common operator supply line requires the installation of a Tandem Compressor Operation Kit. Tandem compressor operation (starting/stopping) is provided by a system pressure switch control connected to a common motor starter. The ADP Tandem Compressor Operation Kits include an AC magnetic contactor/starter with thermal overload protection, a common pilot system control pressure switch with unloader controls, and a compressor unloader piping kit. Four kits are available to meet your total compressor horsepower requirements. See specifications data below. For systems equipped with low voltage remote control panels, the kits TCR1 and TCR2 include a 24 volt contactor box.

#### Installation:

1. Install both compressors according to the Compressor Installation Manual, except:
  - A. The field wiring to the compressor will come from terminals T1 and T2 of the starter relay (See wiring diagram).
  - B. The piping connections from the operator must be made as described below (See piping diagram).
2. Install 1/2" copper tubing from the storage tank valve of each compressor to a common main header as illustrated below. The main header should be 3/4" or larger for a compressor combination of 4 HP or more.
3. Connect the system pressure switch into the main header using a tee as shown.
4. Complete the piping connection from the operator to the main header.
5. Remove the pressure switch covers from both compressors, but not from the system pressure switch. Increase the pressure settings on both switches by turning the high pressure (large) adjustment screws approximately two (2) turns clockwise. Replace the covers. System start/stop control will not be performed by the system pressure switch on the main header.
6. Remove the 1/4" copper tubing that connects the pressure switch to the outlet tee on the ultrair filter on each unit.
7. Run the provided 1/4" copper tubing from the outlet tees of the ultrair filters to a common tee connected to the pressure unloader valve on the system pressure switch.

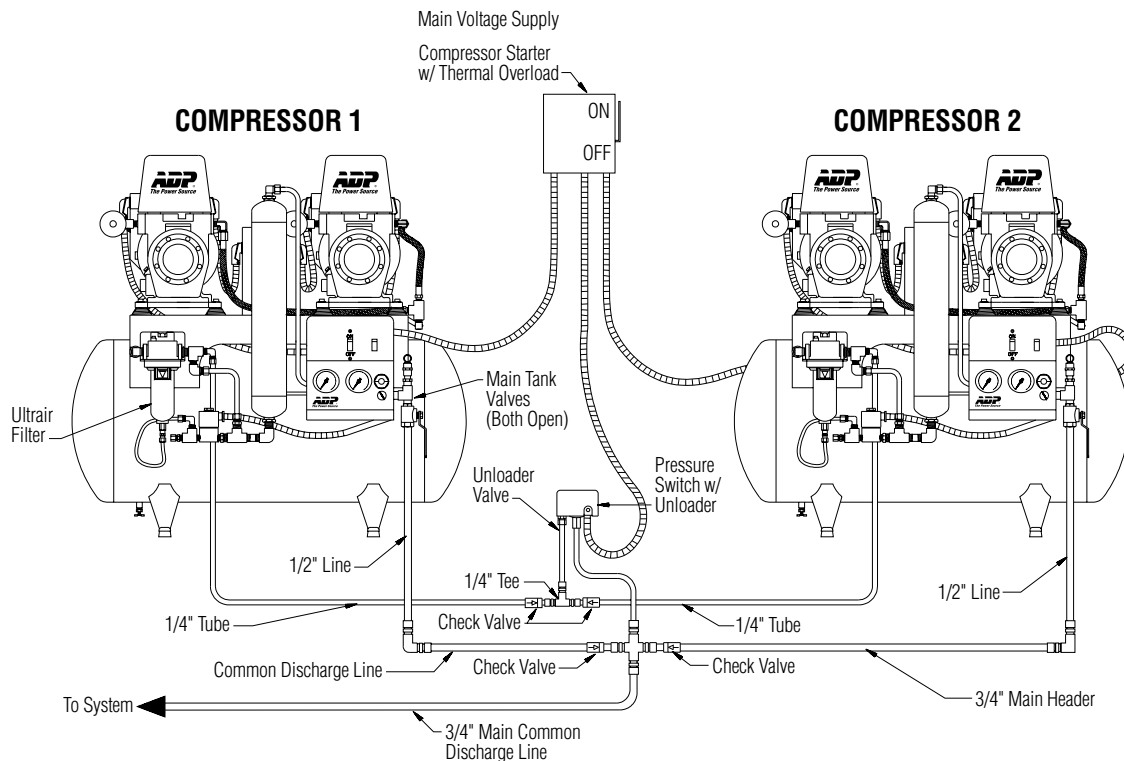
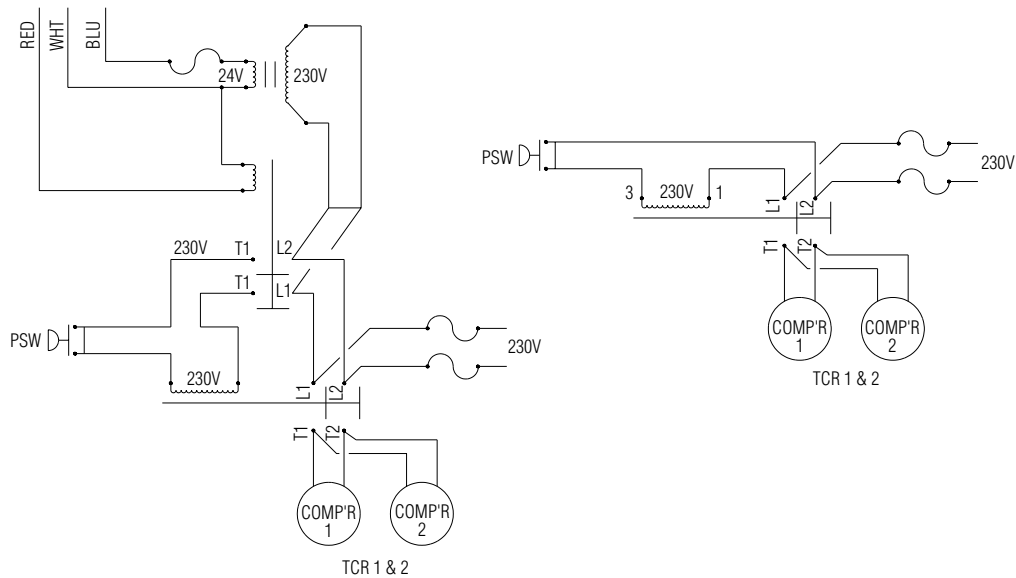
#### Recommended Main Circuit Size

Combined Amperage of Compressors (A)	Circuit Breaker Size (A)	Copper Wire (Gauge)	Minimum Conduit Size
00.0 to 17.0	20	14	1/2
17.1 to 25.5	30	12	1/2
25.6 to 34.0	40	10	1/2
34.1 to 42.5	50	8	3/4
42.6 to 51.0	60	6	1

**NOTE:** Consult your local electrical code to be sure of proper wire size, overload current protection and disconnect means. Never operate this equipment without complete and proper grounding.

#### Wiring Instructions:

1. Mount AC Magnetic Contactor Enclosure on the wall within 6 feet of the compressors using the provided hardware.
2. Connect line voltage to Terminals L1 and L2 of AC Magnetic Contactor. Refer to circuit wire sizing chart, and wiring schematics on following pages.
3. Connect individual compressor ON/OFF switch boxes to terminals T1 and T2 of the AC Magnetic Contactor as shown. Use wire gauge recommended in the compressor manual.
4. For model TCR1 and TCR2 kits equipped with low voltage 24 VAC remote control switching, connect red, white, and blue low voltage wires to corresponding colored wires from ADP remote control panel air switch.



**Piping Diagram**

### Warranty Information: 90 Days

All ADP accessories are thoroughly inspected and tested in accordance with rigid specifications and standards. Our accessories are guaranteed against any defective material and workmanship from the date of shipment; provided that the installation, operation, and maintenance is done in accordance with ADP procedures as outlined in our Installation and Maintenance Guides. Warranty cards must be returned to ADP within ten days of installation to effect warranty. No other warranties or guarantees, expressed or implied are made.

ADP's obligation under the warranty is to provide parts for the repair or, at its option, to provide the replacement product (excluding labor). All special, incidental and/or consequential damages are excluded. We will not issue credit for accessories without first attempting to correct the problem in the field. Written notice of breach of warranty must be given to ADP within the warranty period. The warranty does not cover damage resulting from improper installation or maintenance, accident or misuse. The warranty does not cover damage resulting from the use of cleaning, disinfecting or sterilizing chemicals and processes. The warranty does not cover vacuum failures due to hard water deposits. Failure to follow instructions provided in ADP's Installation and Maintenance Guides may void the warranty.